JFCOM

Joint Innovation and Experimentation Enterprise Update

Colonel Kelly Mayes
USJFCOM, J9

JI&E Customers & Partners

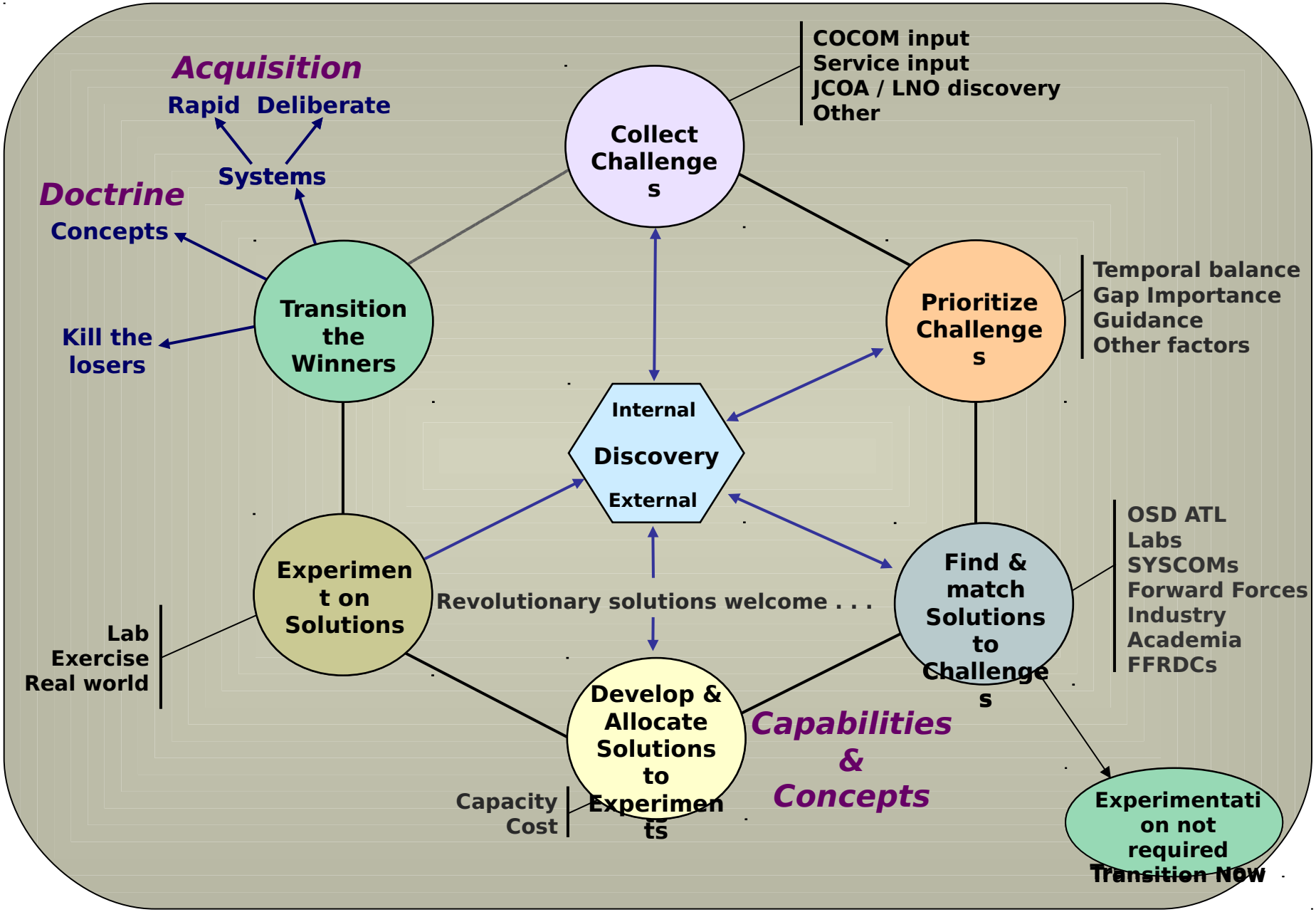
Technical idea implementers

Non-US or non-military partners

Technical idea factories

Concept idea factories

How We Do It: The JI&E Enterprise Process



CDR's Transformation Strategic Goal

A Long War Focus …
…Implications to JFCOM

Goals

- Provide Focused Support to Win the War on Terror
- Deliver Trained, Capable, Interoperable Joint Force
- Ensure Global Force Management & Visibility
- Develop Robust, Capable Joint Command & Control
- **Lead continuous effort to Transform the Joint Force**
- Establish Enhanced, Agile Business Processes

Lead the Transformation of the Joint Force

Cross-coordinate the transformational actions of the services, other government agencies, and our international partners to improve our ability to conduct integrated planning, coordination, and execution of complex operations.

Identify and develop the joint capabilities that provide COCOM Commanders with the ability to operate continuously and effectively within any adversary's decision-cycle, under any conditions, now and in the future.

J9 MISSION

Coordinate Department of Defense Concept Development and Experimentation efforts and lead the development, exploration and assessment of new joint concepts, organizational structures and emerging technologies.

Strong OSD advocacy is essential

Why We Do It

JFCOM Transformational Objectives

1. Enable Achievement of Unified Action
2. Integrate Operations with Intelligence
3. Enhance Joint Command and Control
4. Improve Joint Force Deployment and Sustainment
5. Develop Joint Concepts
6. Enable Strategic Communications
7. Develop & Support JI&E Community Processes

How We Do It

Dimensions of Transformation

- Organizational Design
- Capabilities
- Processes
- Authorities
- Concepts
- Cultures

Unclassified
JFCOM Transformational Objectives
1. Enable Achievement of Unified Action
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J9 – United States Joint Forces Command
Unclassified
3

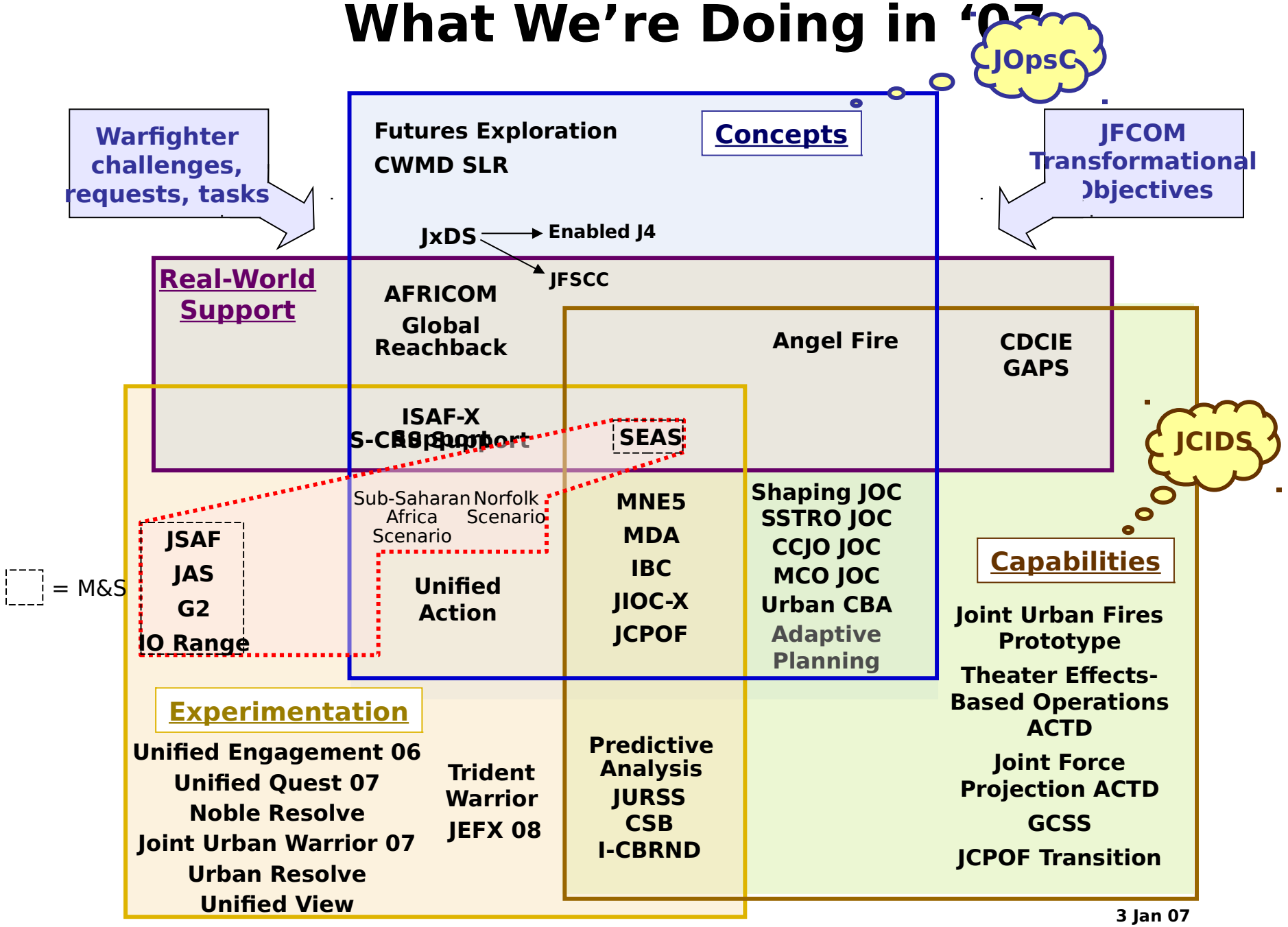
J9 Business Lines

- **Joint Concepts** (ways of operating)
- **Joint Capabilities** (means of operating)
- **Integrating Environment** for transformation activities

JFCOM J9 organization:

- Deployment & Logistics Unit
- Future s Unit
- Innovation Unit
- Experimentation Unit

What We're Doing in '07



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The Synthetic Experimentation Tool Kit

Synthetic Environment for Analysis & Simulation (SEAS)

Effects-Based

Incorporates: Political, Military, Economic, Social, Information, and Infrastructure (PmESII) interactions for 62 countries.
Integrates: Non-State Actors, such as terrorist networks, black market economy, and competing insurgent groups.
Demonstrates: Media and propaganda's influence on public opinion.

CUSTOMERS

SOUTHCOM, DOS, OSD PA&E, JS J8, USMC, Gen McNeill & ISAF-X

CUSTOMERS

CENTCOM, Navy, AFRL, USMC, Australia

Typical *and* Specific urban environments: Based upon real world locations.
Culturally relevant , populated by up to 2 million citizens.
Air/Sea/Land: Sensors and weapons can interact.
Distributed: Super computer supported.
USJFCOM Proponent: Built, enhanced, managed. Only

Joint Semi-Automated Forces (JSAF)

Virtual Human-in-the-Loop

Joint Analysis System (JAS)

Constructive

Joint Campaign Analysis tool: BORN JOINT simulation.
Uncovers joint interdependencies: Supports rigorous trade-space analysis.
Perception-based: C4ISR dependent.
Adaptive architecture: Provides capability to multiple communities, DISA certified for distributed use on SIPRNET

CUSTOMERS

OSD PA&E, OSD NII, DTRA, USAF

CUSTOMERS

JIEDDO, OSD DDRE, ISAF-X

Automation Systems: Optimize transportation feasibility.
Enterprise Modeling: Operational Net Assessment (ONA) modeling.
Network Systems: Compares information sharing concepts.
Practice & Policies: Models organizational structures.

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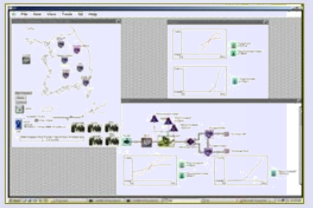


Process Modeling

Discovering Alternative Futures

To Whom We Listen

- Senior mentors
- Transformation Advisory Grou
- Intelligence community
- COCOMs/Services
- JFCOM Components
- OSD/Joint Staff
- USG Departments & Agencies
- Multinational partners/NGOs
- Service Colleges/Academia
- FFRDCs
- Industry

Inputs/Outputs

- Web search/literature search
- Service and joint concepts
- War games
- Seminars/conferences
- Red Cell
- *Joint Operational Environmen*
- Senior leader forums
- Monthly e-mail products
- Briefings to leadership
- White papers

UNCLASSIFIED

Alternative Futures: Variables

Population
- Demographics
- Growth
- Migration

Economic
- The course of globalization
- The course of "flattening"
- Differentiation
- U.S. economy and debt servicing

Information
- Computing power
- Software advances
- Media trends
- Information discipline
- Information systems vulnerabilities

Ideologies
- Religious extremism
- Anti-globalization

Culture
- Gender
- Religious
- Education
- Decision
- Media
- Commercial

Resources
- Energy
- Water
- Food

Actors
- Transnational groups
- Organized crime
- Non-governmental organizations
- Inter-governmental organizations
- Leaders in ungoverned areas
- State sponsors of transnational groups

Environmental
- Global warming
- Natural disasters

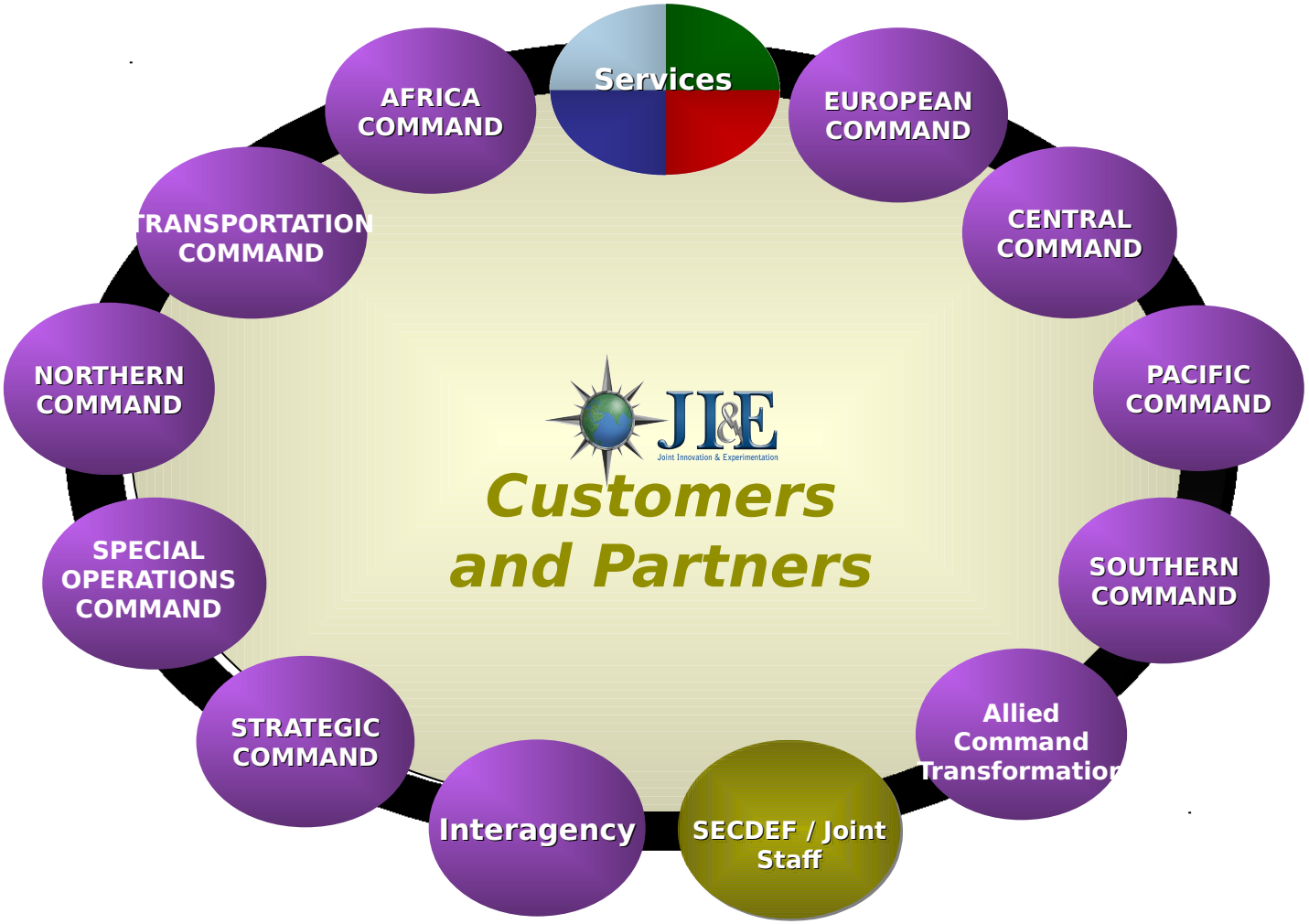
Political
- U.S. elections
- Other elections
- Alliances

Military Threats
- Traditional
- Irregular
- Disruptive
- Catastrophic

Health
- AIDS
- Other pandemics
- Bio-terrorism

UNCLASSIFIED 7

Primary Customers



Joint EUCOM/J9 Initiatives

- **PMSEII prototype supporting Unified Action and Combined efforts**
- **Scaleable JxDS Logistics**
- **Joint Mission Modeling Tool toolkit**
- **New COCOM development**
- **Shaping concept development**

Back

Joint CENTCOM/J9 Initiatives

- Synthetic Environment for Analysis & Simulation (SEAS) M&S Effort
- Geospatial Analysis & Planning Support (GAPS) sensor placement support
- Scaleable JxDS Logistics
- CIED sensor employment options; input to CIED CPLAN; CIED Nodal Assessment
- Joint Virtual Operational Tool (JVOT) to rotating forces
- Joint Urban Fires Prototype (JUFP) support
- Multinational Forces Iraq (MNF-I) Portal
- Joint Deployment and Distribution Enterprise support

Back

Joint PACOM/J9 Initiatives

- Synthetic Environment for Analysis & Simulation (SEAS) Modeling and Simulation support
- Scaleable (JxDS, PDDOC-K, DIRMOBFOR-S) Logistics
- Joint Deployment and Distribution Enterprise support
- Live-fire experiment on IO Range
- Special Programs SME Terminal Fury/Talisman Saber

Back

Joint SOUTHCOM/J9 Initiatives

- **Synthetic Environment for Analysis & Simulation (SEAS) Modeling and Simulation support**
- **Collaboration tool suite and analytical support to US/Argentina crisis consequence management experiment**

Back

Joint STRATCOM/J9 Initiatives

- **Weapons of Mass Destruction (WMD) / Counter-WMD (CWMD) event support and Senior Leader Review**
- **Global Strike Experimentation**
- **Unified Quest - Global Deterrence, Shaping and Force Management**
- **Special Programs SME Global Lightning**

Back

Joint SOCOM/J9 Initiatives

- Irregular Warfare JOC
- Scaleable JxDS Logistics
- Synthetic Environment for Analysis & Simulation (SEAS) Modeling and Simulation Effort
- Joint Urban Fires Prototype support
- Special Programs SME Able Warrior

Back

Joint NORTHCOM/J9 Initiatives

- **Noble Resolve initiatives - including Maritime Domain Awareness (MDA), Pandemic Influenza, etc.**
- **Spiral development for MDA CONOPS – international, state, local and commercial partnerships**
- **HD Concept Development**
- **Partnership of J9 operational and NC-state tactical models and simulations for homeland defense**

Back

Joint TRANSCOM/J9 Initiatives

- **Scaleable JxDS Logistics**
- **Unified View**
- **Joint Deployment and Distribution Enterprise support**

Back

JI&E / Service Initiatives

Joint Air Force/J9 Initiatives

1. Urban Resolve – Directed energy weapons; UAS proliferation and airspace control initiatives; Non-traditional ISR
2. Unified Engagement 06 – Persistent ISR; Joint Interagency Support Team (JIST).
3. Joint Force Provider ACTD
4. JI&E Enterprise Program Guide and CPLAN for Joint Experiments
5. Joint Analysis System (formerly JWARS) for joint force capability analysis
6. Unified View 06 – Integration of Force Projection and Sustainment
7. Requirements
8. Sharing Operational Concept
9. Distributed Experimentation Environment

Joint Army/J9 Initiatives

1. Urban Resolve 2015/Omni Fusion
2. Unified Quest Series
3. UR CO CIED Support
4. Joint Fires Initiative Support
5. JFSCC/JxDS Support
6. Joint Operating Environment (JOE) Collaboration
7. CPOF to JCPOF
8. Joint Precision Airdrop System Development
9. Co-Development of MCO & SSTRO Concepts
10. Experimentation Enterprise Process Guide Development

Joint Navy/J9 Initiatives

1. TLAM 3rd party targeting (UR2015, JUFP)
2. Maritime Domain Awareness (TW07, MNE5, UQ07)
3. Maritime Headquarters Development (TW07, JEFX 08)

Joint Marine Corps/J9 Initiativ

1. Joint Urban Warrior (JUW) War Game series
2. Expeditionary Warrior (EW) War Game series
3. Joint concept development support (JUO, SSTRO, etc.)
4. Joint prototype development support (JCPOF, CIED, etc)
5. Joint experimentation support (Urban Resolve, UA, and MNE)
6. Joint modeling & simulation support (SEAS, IGS, etc.)

JFCOM PRODUCTS

Deliverables

Customers	SA	$	Venues	M&S SPT	Advocacy	Solutions
COCOMs						
Servic						
Defense Agencies						
Joint Staff						
MN						
IA						

Takeaways

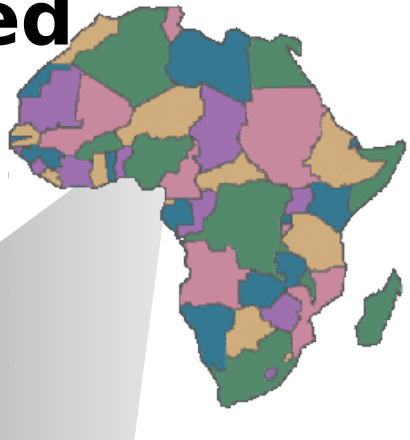
Taking JI&E to the next level:

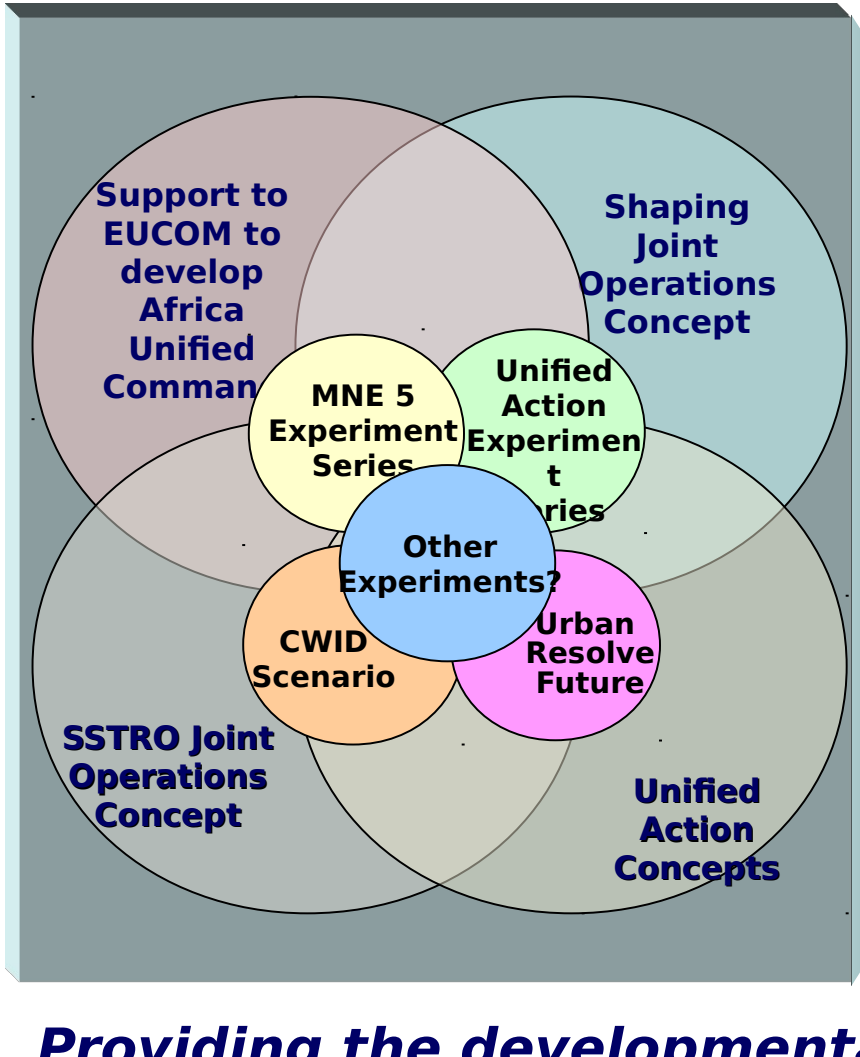
- **Improve how we gather and prioritize Warfighter Challenges**
- **Improve our understanding of alternative futures**
- **Gain better visibility over the domain of potential solutions**
- **More fully capture the range of experimentation activity . . . including in the field**
- **Bring more experimentation into exercises**
- **Improve linkage among experiments & exercises**
- **Greater emphasis on transition of products to users**
- **Link more closely with Joint Staff and OSD processes**

Keep the transformation momentum going

“Unique joint solutions to the problems our customers are trying to solve”

Linking Joint Concepts and Unified Action Through Experimentation





Partners

- DOS
  - PM
  - AF
  - CRS
- USAID
- Other IA
- NGOs
- EUCOM

- Less costly to develop a single scenario
- No investment for players to learn a fictitious scenario
- Raise awareness of Africa and inform potential future operations

Providing the developmental framework for Unified Action . .

. . . While gaining key insight into areas we may operate in

Enable Achievement of Unified Action

Unified Action Series

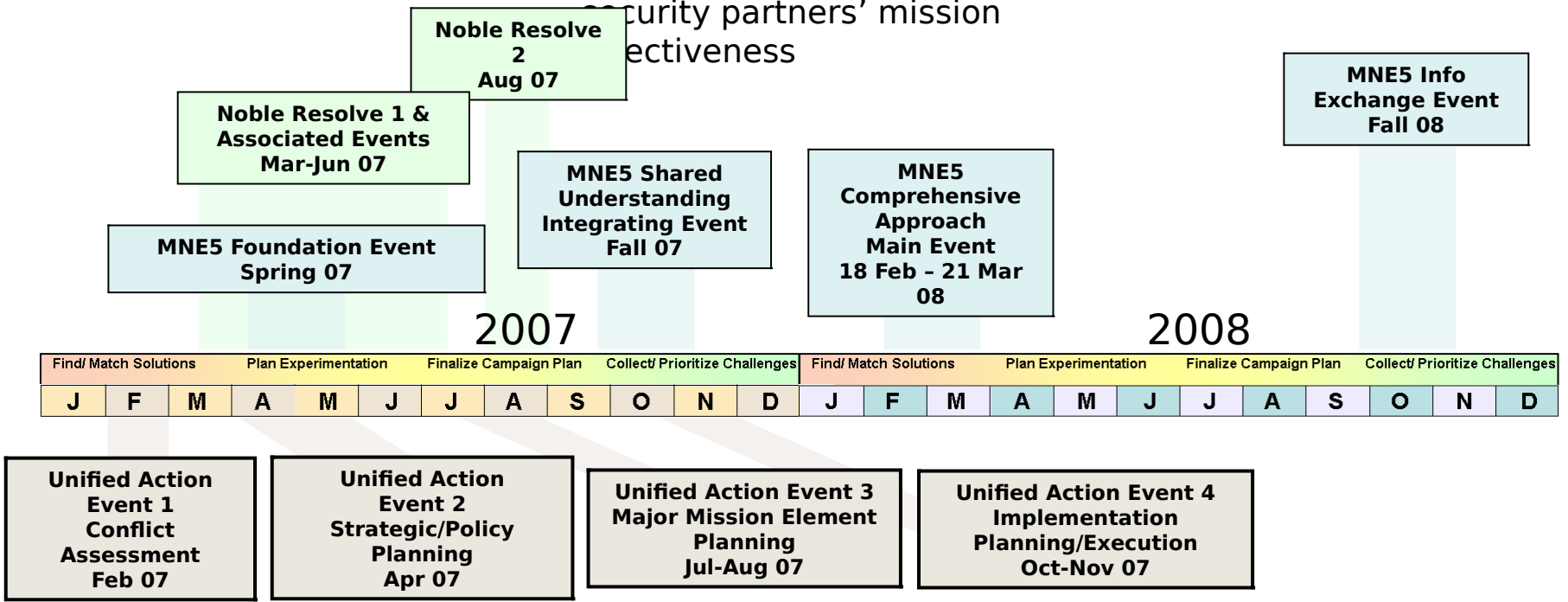
Objective: Test the structures, processes, and capabilities necessary to improve USG whole-of-government capacity to plan for and execute integrated conflict and crisis prevention, mitigation or response operations

Noble Resolve Series

Objective: Investigate and identify capability gaps, develop recommendations, DOTMLPF proposals and new tactics, techniques and procedures to measurably improve the COCOMs' and homeland security partners' mission effectiveness

Multinational Experiment 5

Objective: Investigate and develop an agreed method by which multinational partners can plan, execute and assess a comprehensive approach to crisis prevention and response


Noble Resolve 2 Aug 07
Noble Resolve 1 & Associated Events Mar-Jun 07
MNE5 Foundation Event Spring 07
MNE5 Shared Understanding Integrating Event Fall 07
MNE5 Comprehensive Approach Main Event 18 Feb – 21 Mar 08
MNE5 Info Exchange Event Fall 08
2007
2008
Find/ Match Solutions
Plan Experimentation
Finalize Campaign Plan
Collect/ Prioritize Challenges
J F M A M J J A S O N D J F M A M J J A S O N D
Unified Action Event 1 Conflict Assessment Feb 07
Unified Action Event 2 Strategic/Policy Planning Apr 07
Unified Action Event 3 Major Mission Element Planning Jul-Aug 07
Unified Action Event 4 Implementation Planning/Execution Oct-Nov 07

Integrate Operations with Intelligence

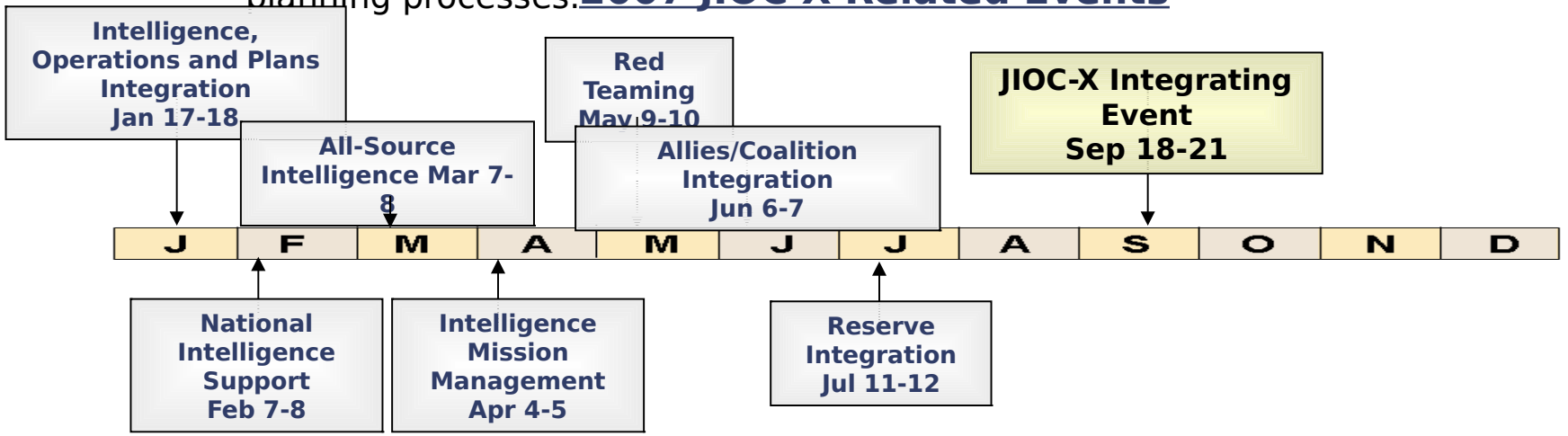
Joint Intelligence Operations Center - Transformation (JIOC-X)

The JIOC-X is an entity created to address, develop, experiment with and deliver joint operational intelligence solutions to increase the combat effectiveness of Combatant Commanders and other related DoD activities

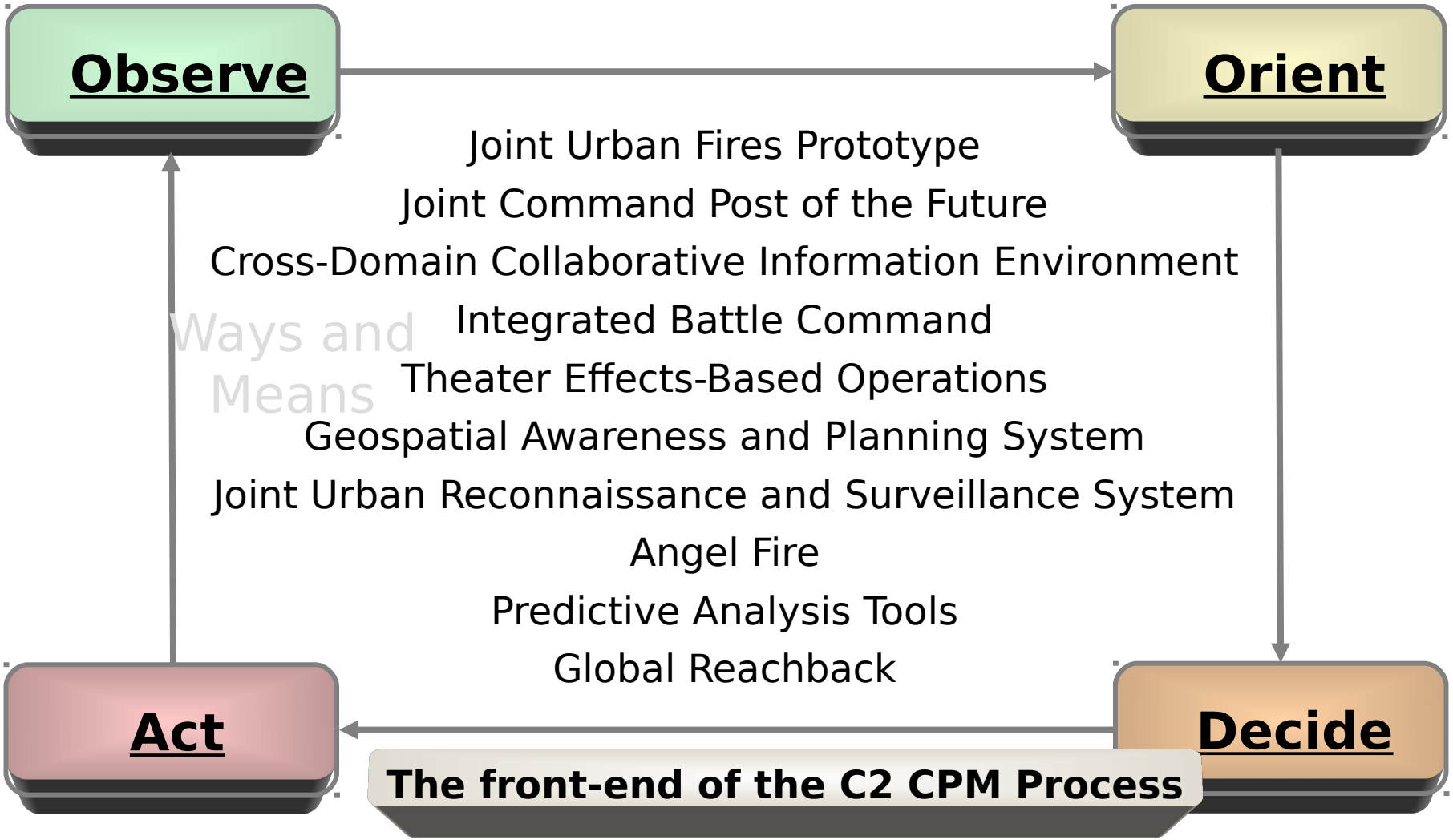
Focus Areas:

- Improving joint intelligence, operations, and plans integration and interoperability;
- Expanding information access and sharing;
- Improving situational awareness;
- Increasing the speed/agility of operations; and,
- Incorporating Intelligence Campaign Planning into emerging operational planning processes.

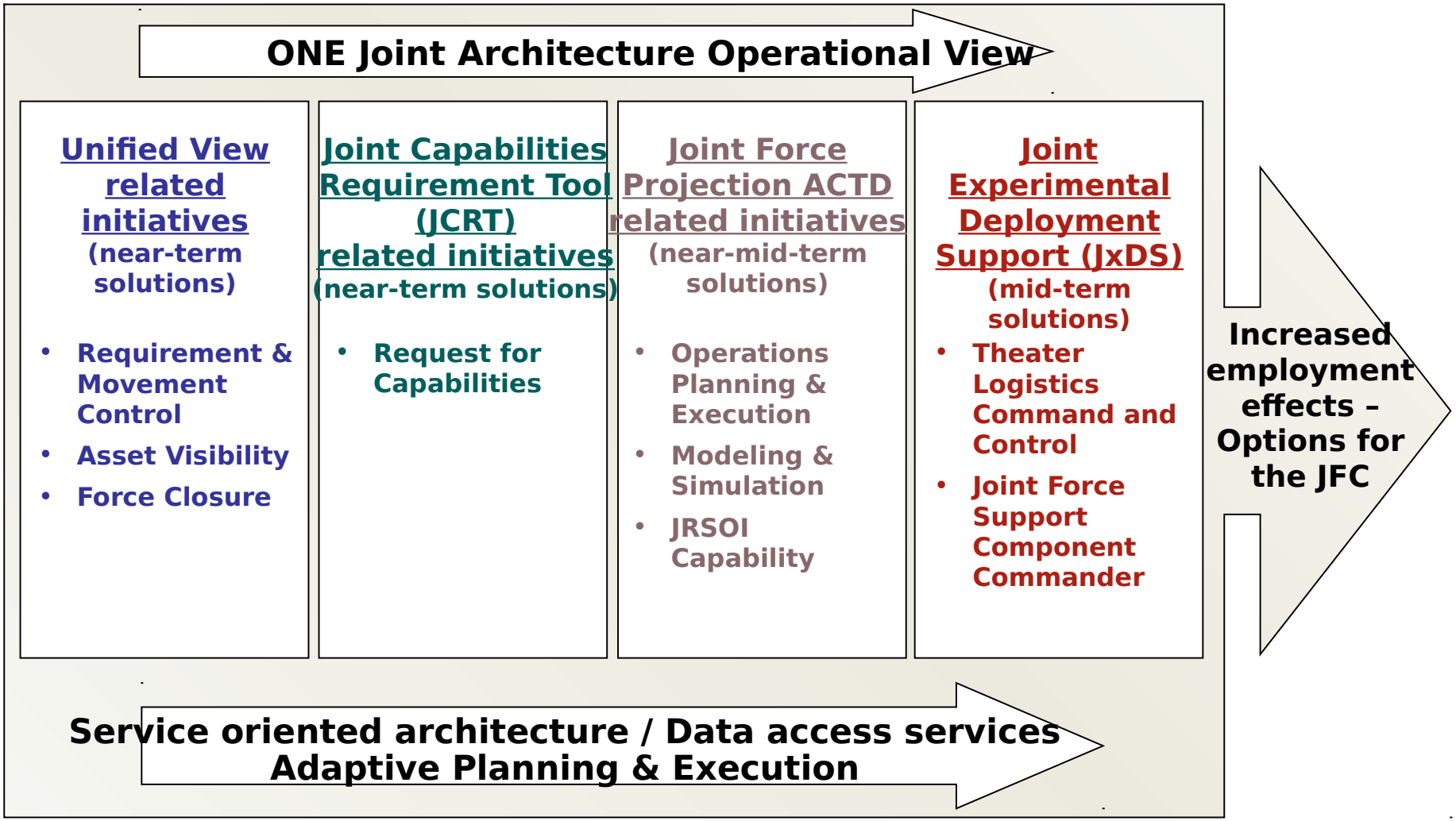
2007 JIOC-X Related Events



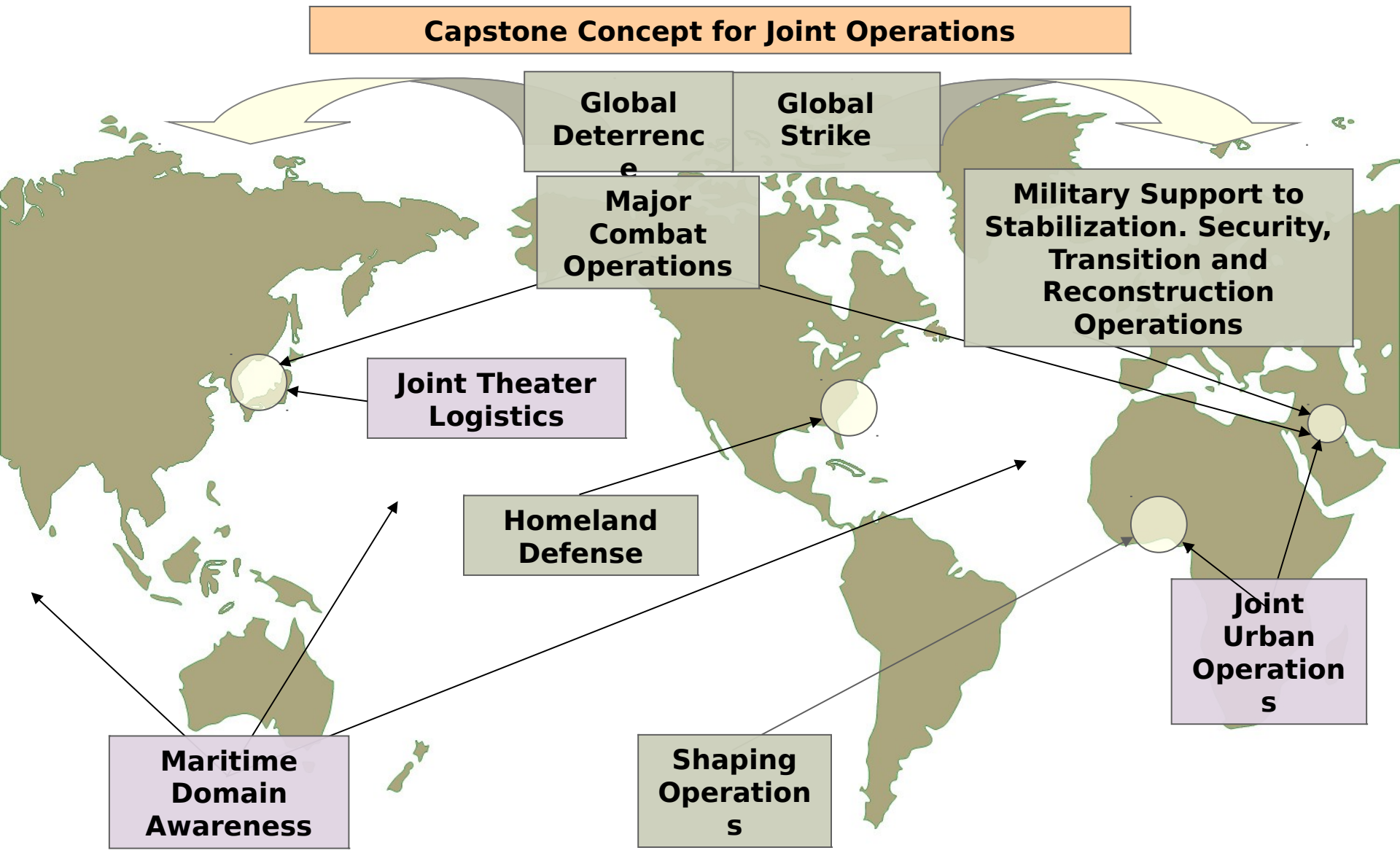
Enhance Joint Command and Control



Improve Joint Force Deployment and Sustainment

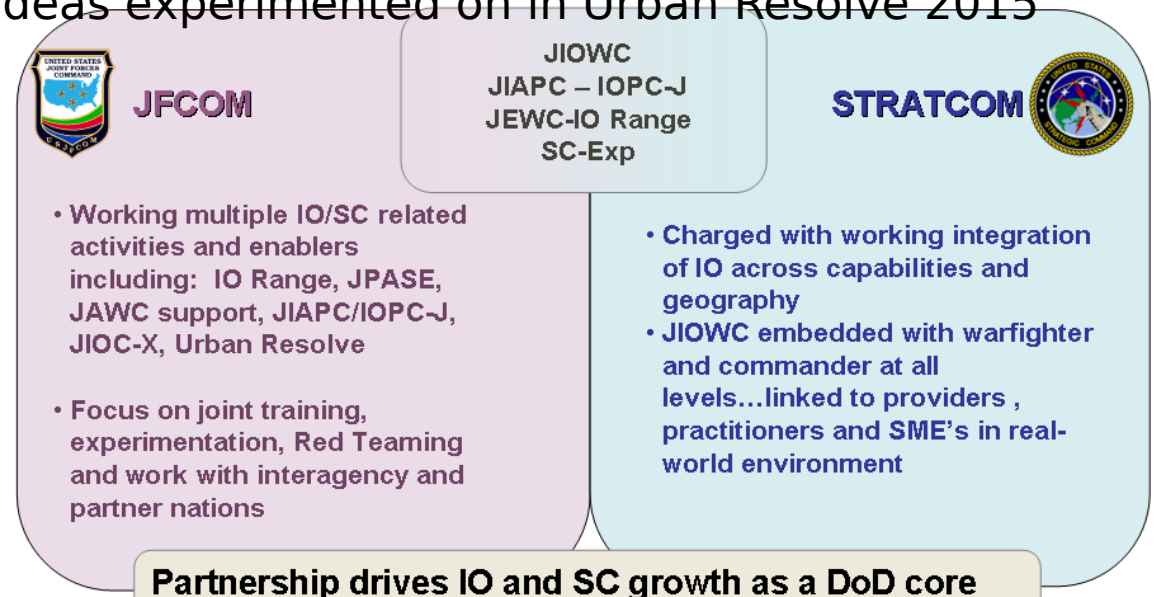

ONE Joint Architecture Operational View
Unified View related initiatives
(near-term solutions)
• Requirement & Movement Control
• Asset Visibility
• Force Closure
Joint Capabilities Requirement Tool (JCRT) related initiatives
(near-term solutions)
• Request for Capabilities
Joint Force Projection ACTD related initiatives
(near-mid-term solutions)
• Operations Planning & Execution
• Modeling & Simulation
• JRSOI Capability
Joint Experimental Deployment Support (JxDS)
(mid-term solutions)
• Theater Logistics Command and Control
• Joint Force Support Component Commander
Increased employment effects – Options for the JFC
Service oriented architecture / Data access services
Adaptive Planning & Execution

Develop Joint Concepts

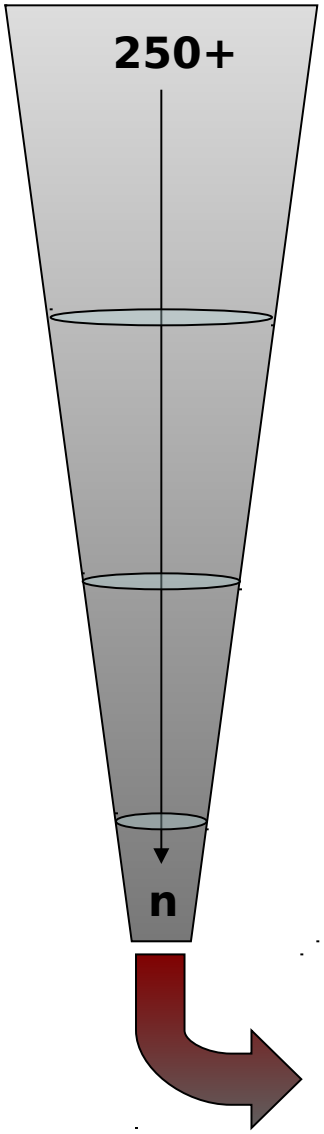


Enable Strategic Communications

- Actions taken to achieve effects in the perception and influence domains, including:
  - Traditional Information Operations pillars
  - Media operations
  - Physical actions to create information effects
  - Strategic Messaging
  - Public diplomacy
- Partnership with STRATCOM:
  - Direct support to Joint Information Operations Warfare Command
  - Initial ideas experimented on in Urban Resolve 2015


JFCOM
JIOWC
JIAPC – IOPC-J
JEWC-IO Range
SC-Exp
STRATCOM
• Working multiple IO/SC related activities and enablers including: IO Range, JPASE, JAWC support, JIAPC/IOPC-J, JIOC-X, Urban Resolve
• Focus on joint training, experimentation, Red Teaming and work with interagency and partner nations
• Charged with working integration of IO across capabilities and geography
• JIOWC embedded with warfighter and commander at all levels…linked to providers , practitioners and SME's in real-world environment
Partnership drives IO and SC growth as a DoD core competency and directly supports warfighter needs

Focusing Joint CDE to Priority Challenges



Screen

Separate challenges from concerns Eliminate those with limited joint value, limited specificity, lacking any known potential solution, or lacking experimentation potential

Consolidate

Combine similar challenges into similar focus groupings (reduce redundancies and identify synergies)

Map to JCAs

Prioritize

Align JCDE Enterprise effort to key challenges that are ripe for experimentation

Subjectively grade criticality of Challenge

Add Modifying Values
- Higher Tasking
- MPMI Relevance
- Level of War
- JOpsC Gap
- Multiple COCOM Interest

Apply Criteria Weighting

Conduct Sensitivity Analysis

Analyze Results (Review and Refine)

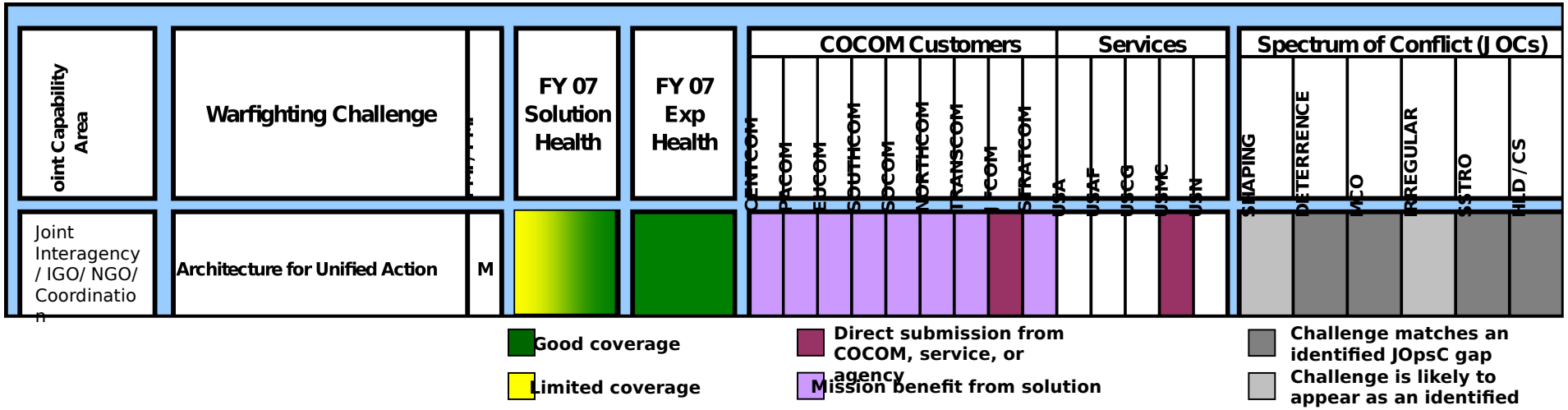
Collaborative Review

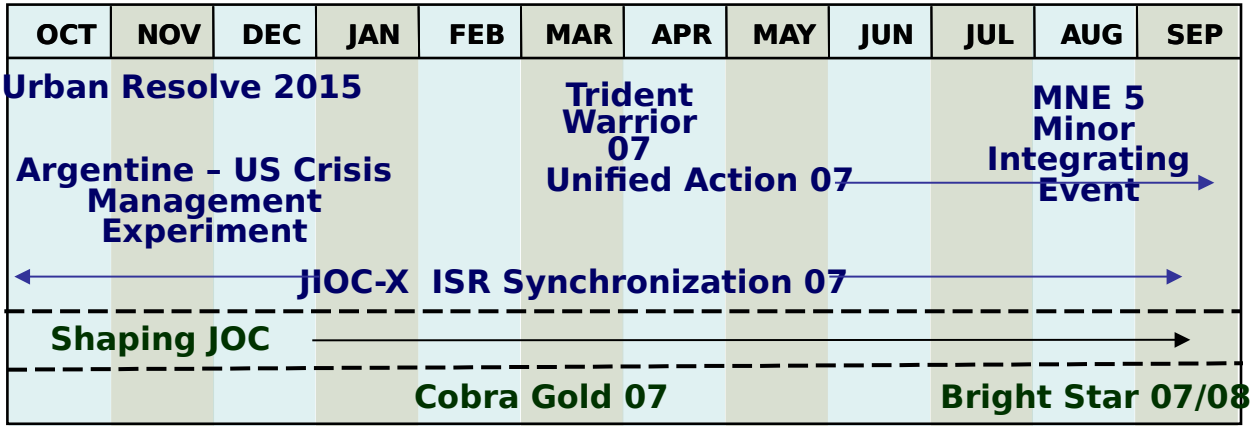
Prioritized Challenges Within the Transformational Issues

From Warfighter Challenge to Experiment

Challenge: Architecture for Unified Action
The Joint, IA, MN, IGO, NGO community requires an architecture that provides structures, processes, and capabilities for planning, coordination, execution and assessment of operations to rapidly achieve the desired effects through a unified effort by all mission partners.

Architecture for Unified Action Selected Solutions	Lead Organizations
Cross-Domain Collaborative Information Environment	JFCOM, J9
MN IA & NGO Information Flow	JFCOM, J9
Coalition Shared Intelligence Network Environment	EUCOM
USG Handbook on Stabilization and Reconstruction	JFCOM, J9
USG Planning Process	JFCOM, J9
Multinational Interagency Group Process	JFCOM, J9
Scenario-based USG planning tool (Horizon)	JFCOM, J9

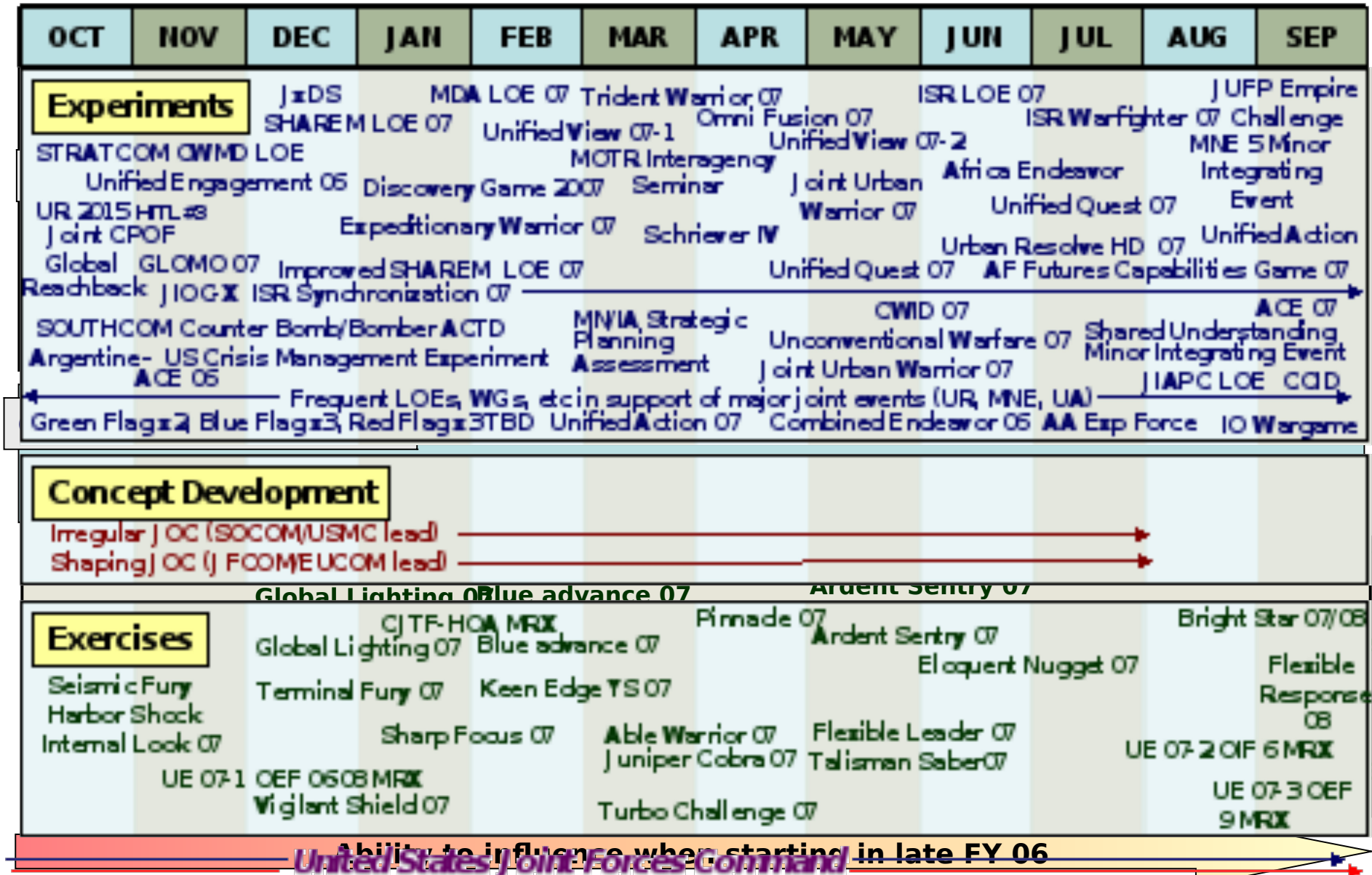




Events	Leads
Argentine-US CME	SOUTHCOM
Urban Resolve 2015	JFCOM, J9
Unified Action 07	JFCOM, J9
MNE 5 Minor Integ Event	JFCOM, J9
Trident Warrior 07	USN
JIOC-X ISR Synch 07	JFCOM, J9
Shaping JOC	EUCOM/JFCOM
Cobra Gold 07	PACOM
Bright Star 07/08	CENTCOM

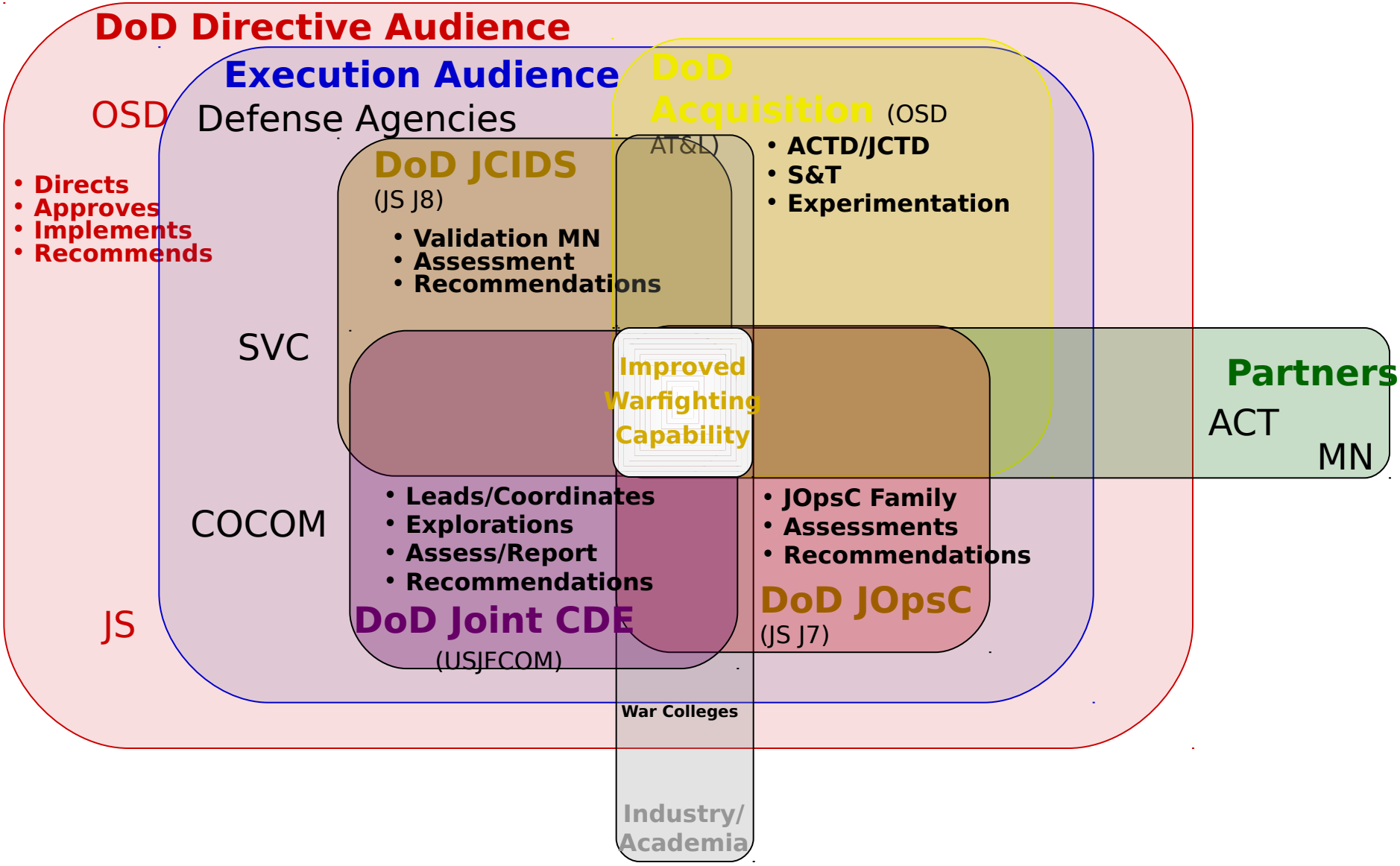
FY 07 Snap Shot

Scheduled Major Experimentation & Exercise Events

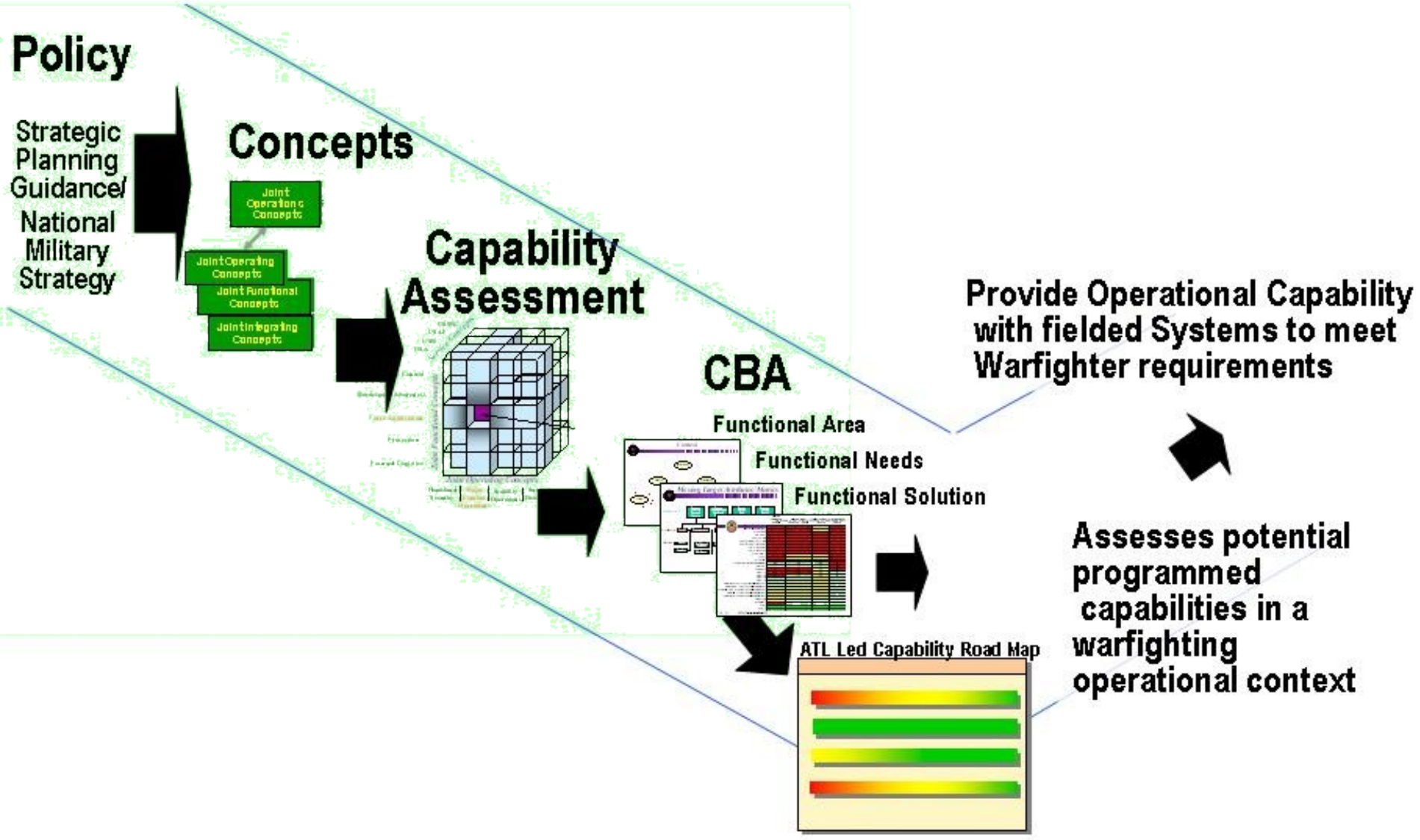


Capabilities Development Environment

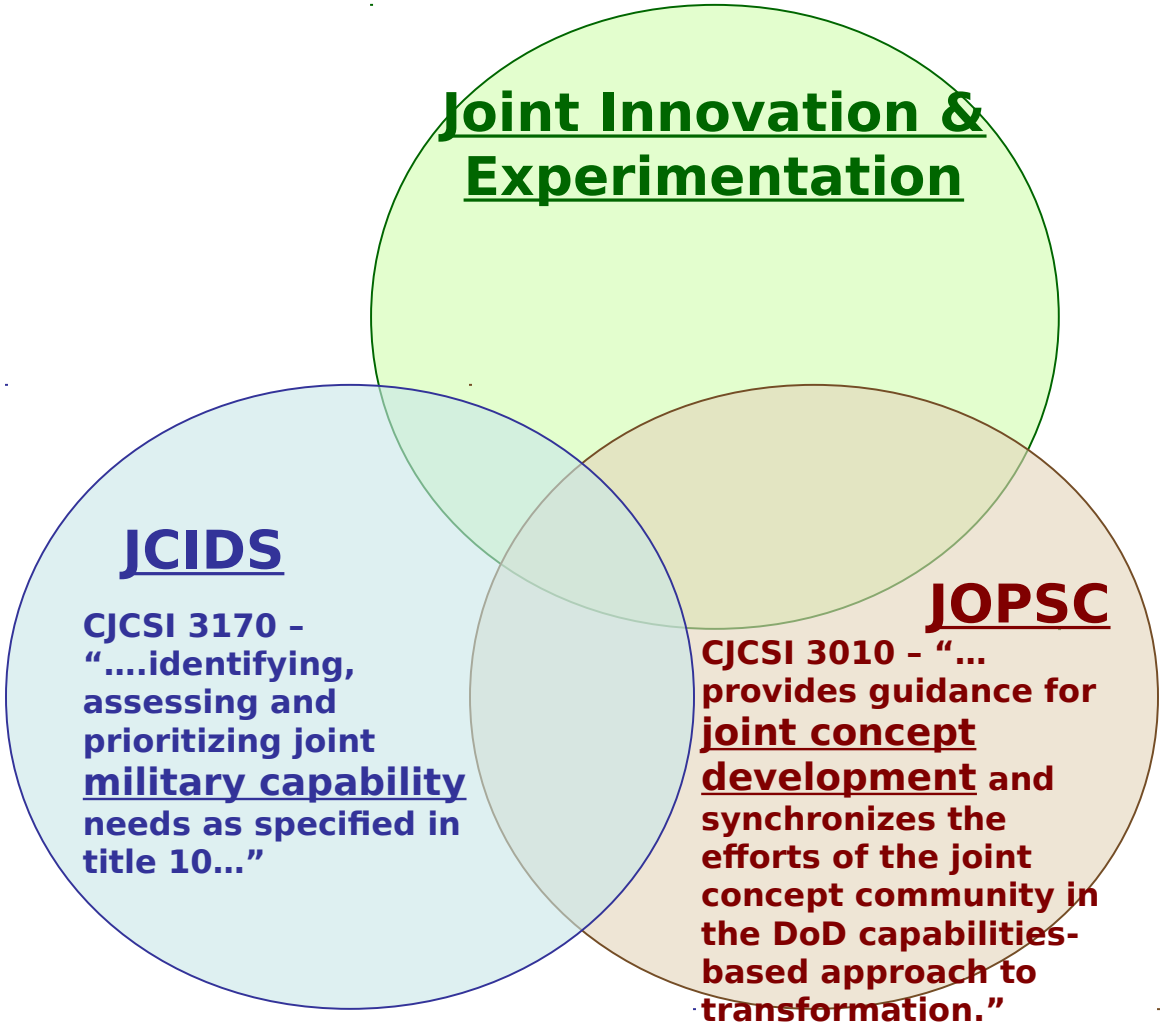
Now and for the Future



Capabilities Development Process



Delivering Improved Warfighting Capability


Joint Innovation & Experimentation
JCIDS
CJCSI 3170 – "….identifying, assessing and prioritizing joint military capability needs as specified in title 10…"
JOPSC
CJCSI 3010 – "… provides guidance for joint concept development and synchronizes the efforts of the joint concept community in the DoD capabilities-based approach to transformation."